EXPERIMENTAL CELL RESEARCH

EDITOR-IN-CHIEF
N. RINGERTZ

ASSISTANT EDITOR
S. ERIKSSON

EDITORS
R. BASERGA · H. M. BLAU · M. BUSTIN · B. CANNON · E. DE ROBERTIS · D. EPEL
W. W. FRANKE · S. J. KAUFMAN · N. LE DOUARIN · G. MAGNUSSON · D. MAZIA
J. MELDOLESI · G. L. NICOLSON · B. ÖBRINK · I. PASTAN · D. M. PRESCOTT · R. ROSS · E. ROZENGURT
F. H. RUDDLE · R. SAGER · U. SCHEER · R. TIMPL · K. WEBER · A. M. ZIMMERMAN

FOUNDING EDITORS
T. CASPERSSON and J. RUNNSTRÖM

VOLUME 176 · 1988

ACADEMIC PRESS, INC.
Harcourt Brace Jovanovich, Publishers
San Diego New York Boston
London Sydney Tokyo Toronto

COPYRIGHT © 1988 BY ACADEMIC PRESS, INC.

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (27 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1988 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0014-4827/88 $3.00

Printed in Sweden by

Almqvist & Wiksell Tryckeri, Uppsala 1988

CONTENTS OF VOLUME 176

NUMBER 1, MAY 1988

REGULAR ARTICLES

JEREMY JOSEPH, IAN GRIERSON, AND ROGER A. HITCHINGS. Exogenous ATP Causes the Contraction of Intact Fibroblasts *in Vitro* 1

AZRA RAZA, ZAHIDA YASIN, AND CATHY GRANDE. A Comparison of the Rate of DNA Synthesis in Myeloblasts from Peripheral Blood and Bone Marrows of Patients with Acute Nonlymphocytic Leukemia 13

GERHARD WIRL AND MICHAEL PFÄFFLE. Collagen-Binding Proteins of Rat Mammary Tumor Epithelial Cells: A Biochemical and Immunological Study 20

GRAZYNA KEMPKA AND VICTORIA KOLB-BACHOFEN. Binding, Uptake, and Transcytosis of Ligands for Mannose-Specific Receptors in Rat Liver: An Electron Microscopic Study 38

G. N. HANNAN, W. REILLY, AND B. R. MCAUSLAN. Mechanisms of Serum Protein Binding and Cell Anchorage to Immobilized Serotonin and Indole Analogs 49

C. SAINT-RUF, P. NARDEUX, S. ESTRADE, D. BROUTY-BOYE, C. LAVIALLE, J. S. RHIM, AND R. CASSINGENA. Accelerated Malignant Conversion of Human HBL-100 Cells by the v-Ki-*ras* Oncogene 60

. NEANT AND P. GUERRIER. 6-Dimethylaminopurine Blocks Starfish Oocyte Maturation by Inhibiting a Relevant Protein Kinase Activity . . 68

R. J. WIESER AND F. OESCH. Contact-Dependent Regulation of Growth of Diploid Human Fibroblasts Is Dependent upon the Presence of Terminal Galactose Residues on Plasma Membrane Glycoproteins 80

ENNIFER LASKEY, IAIN WEBB, HERBERT M. SCHULMAN, AND PREM PONKA. Evidence that Transferrin Supports Cell Proliferation by Supplying Iron for DNA Synthesis 87

LAS FORSBECK, PETER NYGREN, ROLF LARSSON, MIKAEL NILSSON, KENNETH NILSSON, AND ERIK GYLFE. Cytoplasmic pH is Differently Regulated in the Monoblastic U-937 and Erythroleukemic K-562 Cell Lines 96

HIGEO KOYASU, TAKASHI KADOWAKI, EISUKE NISHIDA, KAZUYUKI TOBE, ERIKO ABE, MASATO KASUGA, HIKOICHI SAKAI, AND ICHIRO YAHARA. Alteration in Growth, Cell Morphology, and Cytoskeletal Structures of KB Cells Induced by Epidermal Growth Factor and Transforming Growth Factor-β 107

GEORG REIMER, IVAN RAŠKA, ULRICH SCHEER, AND ENG M. TAN. Immunolocalization of 7-2-Ribonucleoprotein in the Granular Component of the Nucleolus 117

DAVID A. JANS, SARA H. BOTTERELL, AND BRIAN A. HEMMINGS. Codominant Expression of a Mutation Affecting the cAMP-Dependent Protein Kinase Catalytic Subunit in Somatic Cell Hybrids of LLC-PK_1 Cells 129

THOMAS HERGET, DAN GOLDOWITZ, WALTER OELEMANN, AND ANNA STARZINSKI-POWITZ. Description of Putative Ribosomal RNAs with Low Abundance, Developmental Regulation, and the Identifier Sequence 141

ROBERT B. ZURIER, MARY KOZMA, JAMES SINNETT-SMITH, AND ENRIQUE ROZENGURT. Vasoactive Intestinal Peptide Synergistically Stimulates DNA Synthesis in Mouse 3T3 Cells: Role of cAMP, Ca^{2+}, and Protein Kinase C 155

ANGELA BATTISTINI, PAOLA GALLINARI, ANNA MARIA CURATOLA, AND GIOVANNI B. ROSSI. Variation in the Relative Synthesis of Some Proteins in Mammalian Cells Exposed to Hypertonic Medium 162

SHORT NOTES

ANGELA BATTISTINI, ANNA MARIA CURATOLA, PAOLA GALLINARI, AND GIOVANNI B. ROSSI. Inhibition of Protein Synthesis by Diphteria Toxin Induces a Peculiar Pattern of Synthesized Protein Species 174

GARY A. CLAWSON, ANGELA LACKEY, AND ZOLTAN A. TOKES. The 46-kDa Nucleoside Triphosphatase of Rat Liver Nuclear Scaffold Represents the N-Terminal Portion of Lamins A/C 180

SIAWUSCH SAADAT AND HANS THOENEN. Regulation of Tyrosine Hydroxylase mRNA Levels in Rat Pheochromocytoma PC12 Cells by Cell–Cell Contact 187

SHUHSEI UNO AND SHIN-ICHI ABÉ. How Is the Flagellar Length of Mature Sperm Determined? I. Comparison of Flagellar Growth in Spermatids between Newt and *Xenopus in Vitro* 194

NUMBER 2, JUNE 1988

REGULAR ARTICLES

CREMER, D. TESIN, A. H. N. HOPMAN, AND L. MANUELIDIS. Rapid Interphase and Metaphase Assessment of Specific Chromosomal Changes in Neuroectodermal Tumor Cells by *in Situ* Hybridization with Chemically Modified DNA Probes 199

G. VALLE, S. S. BHAMRA, S. MARTIN, G. GRIFFITHS, AND A. COLMAN. Effect of Anti-ER Antibodies within the ER Lumen of Living Cells 221

STEPHEN C. DAHL AND LAURA B. GRABEL. Altered Accumulations of Fibronectin Are Not Dependent on Fibronectin Modifications during the Differentiation of F-9 Teratocarcinoma Stem Cells 234

B. R. McAuslan, W. Reilly, G. N. Hannan, K. Schindhelm, B. Milthorpe, and B. A. Saur. Induction of Endothelial Cell Migration by Proline Analogs and Its Relevance to Angiogenesis 248

P. L. Chang, M. Ameen, C. Z. Yu, and B. M. Kelly. Effect of Ammonium Chloride on Subcellular Distribution of Lysosomal Enzymes in Human Fibroblasts 258

Janice Valmassoi and Richard I. Schwarz. High Serum Levels Interfere with the Normal Differentiated State of Avian Tendon Cells by Altering Translational Regulation 268

Doris Högner, Klaus Lepper, Georg Seibold, and Erich Jost. Lamin Disassembly Kinetics: A Cell-Free System with Extracts from Mitotic HeLa Cells 281

Marikki Laiho. Modulation of Extracellular Proteolytic Activity and Anchorage-Independent Growth of Cultured Cells by Sarcoma Cell-Derived Factors: Relationships to Transforming Growth Factor-β 297

Ruud Brands and Constance A. Feltkamp. Wet Cleaving of Cells: A Method to Introduce Macromolecules into the Cytoplasm. Application for Immunolocalization of Cytosol-Exposed Antigens 309

Gunnar Fager, Göran K. Hansson, Pia Ottosson, Björn Dahllöf, and Göran Bondjers. Human Arterial Smooth Muscle Cells in Culture. Effects of Platelet-Derived Growth Factor and Heparin on Growth *in Vitro* 319

Gabriele Jaques, Martin Rotsch, Cordelia Wegmann, Ursula Worsch, Michael Maasberg, and Klaus Havemann. Production of Immunoreactive Insulin-like Growth Factor I and Response to Exogenous IGF-I in Small Cell Lung Cancer Cell Lines 33

Roger A. Sauterer, Robert J. Feeney, and Gary W. Zieve. Cytoplasmic Assembly of snRNP Particles from Stored Proteins and Newly Transcribed snRNA's in L929 Mouse Fibroblasts 34

SHORT NOTES

Isao Uno, Takehiro Oshima, and Tatsuo Ishikawa. Localization of the Regulatory Subunit of cAMP-Dependent Protein Kinase in *Saccharomyces cerevisiae* 36

Ryoichi Matsuda, Nobuhiro Noro, and Takaharu Ichimura. Myoblast-Mediated Fusion-Injection: A New Technique for Introduction of Macromolecules Specifically into Living Skeletal Muscle Cells 36

ERRATA

Volume 174, Number 1, January 1988: Hirokazu Zaitsu and Genki Kimura, "Serum-Dependent Regulation of Proliferation of Cultured Rat Fibroblasts in G1 and G2 Phases," pp. 146–155 3

Volume 173, Number 1, November 1987: Kaechoong Lee, Mayumi Tanaka, Masakazu Hatanaka, and Fumiyuki Kuze, "Reciprocal Effects of Epidermal Growth Factor and Transforming Growth Factor β on the Anchorage-Dependent and -Independent Growth of A431 Epidermoid Carcinoma Cells," pp. 156–162 . . 3

Author Index for Volume 176 3

The Subject Index for Volume 176 will appear in the December 1988 issue as part of a cumulative index for th year 1988.